death brings to those who had experienced the charm of that hidden inner life which was known to his friends as both kind and just, affectionate and sympathetic.

NOTES.

The retirement of the veteran Prof. Prestwich from the Chair of Geology at Oxford is an event which cannot be chronicled without regret. But it is pleasant to know that he relinquishes the post which he has dignified for so many years to find in the quiet of his country home that leisure and rest to which his long devotion to the cause of science so justly entitles him. He has crowned his professorial career by the publication of the splendid volume which completes his great work on geology. On the very day after the appearance of that volume the electors met at Oxford to select from the numerous candidates a successor to fill his place. His University and the science of geology may both be congratulated on their choice. Prof. Green, whom they have chosen, is one of the most accomplished geologists in the country, one who has been trained in the practical school of the Geological Survey, who has done admirable original work, and who possesses in no common measure the power of luminous exposition. He is gifted, moreover, with a faculty in which geologists are often singularly defective, that of mathematical investigation, and we may hope that one of the results of his transference to Oxford will be to afford him an opportunity of devoting himself to the attack of many geological problems from the mathematical side. He carries with him to his new sphere of labour the best wishes of all to whom the progress of geology and the cultivation of science at the Universities are dear.

On May 27 next Prof. F. C. Donders, of Utrecht, will be seventy years of age. The law requires that he shall then resign his duties as Professor at the University and as Director of the Physiological Laboratory, and it is thought that men of science in all parts of the world may be glad to take the opportunity of expressing their appreciation of the great services Prof. Donders has rendered to the study of physiology and physiological optics. An influential committee has been formed in Holland for the purpose of giving effect to this idea, and the proposal is that Prof. Donders' name should be connected in a permanent way with the spot where he has lived and worked for more than forty years, by the creation of a fund to be devoted to a scientific purpose, and to be known as the "Donders Memorial Fund." The uses to which the fund will be put, and the rules by which its administration will be governed, will of course be determined in accordance with the wishes of Prof. Donders. The Ophthalmological and Physiological Societies have taken the matter in hand in this country, and we have no doubt that the committees they have appointed will do their work satisfactorily. It ought not to be difficult for them to secure an adequate token of the respect felt in England for an illustrious man of science to whom the medical profession and the public are so deeply indebted. It is proposed that the amounts contributed by the several donors be not specified, but that they be grouped into a common sum for transmission to the Dutch Committee; and that the names of those contributing be inscribed in a suitable form for presentation to Prof. Donders. For this reason smaller as well as larger subscriptions will be acceptable. Subscriptions may be sent to Dr. Gerald F. Yeo, Secretary of the Committee of the Physiological Society (address—King's College, London, W.C.), or to Dr. W. A. Brailey, Secretary of the Committee of the Ophthalmological Society of the United Kingdom (address—11 Old Burlington Street, London, W.). Subscriptions may also be sent to the office of this journal.

At a meeting of the Royal Society of Edinburgh, held on January 30, Profs. Clausius, Haeckel, and Mendeléeff were elected Honorary Fellows.

Sir James Paget, F.R.S., has consented to give the annual address to the students of the London Society for the Extension of University Teaching, at the Mansion House, on Saturday, March 3, at 3.30 p.m., under the presidency of the Lord Mayor. The subject of the address will be "Scientific Study."

A marble medallion portrait of the distinguished palæontologist, Dr. Thomas Davidson, F.R.S., first chairman of the Brighton Museum Committee, was unveiled in the geological room of the Free Town Museum, Brighton, by the Mayor, Mr. E. Martin, on Friday, the 17th inst. The medallion, which is much admired, is the work of Mr. Brock, A.R.A. It was presented to the town on behalf of the subscribers by Mr. Edward Crane, chairman of the Museum Committee, who referred in detail to Dr. Davidson's services to science and to the Museum. Sir R. Owen sent a letter regretting that failing health prevented his paying the respect of personal attendance to the memory of his distinguished fellow-worker. Prof. Judd also wrote bearing cordial testimony to the skill and enthusiasm with which Dr. Davidson carried on his researches.

General Perrier, the most eminent French authority on geodesy, died at Montpellier on Monday at the age of fifty-five. He had attained the rank of Brigadier-General in the French army, and was at the head of the Geodetic Department at the War Office. He was a member of the Academy of Sciences.

The relations of science and religion do not form one of those topics which we permit ourselves to discuss in Nature. At the same time we may call attention to a series of three remarkable articles on "Darwinism and the Christian Faith" recently published in the *Guardian* (January 18, January 25, and February 1, 1888), and now reprinted as a pamphlet. The author is anonymous, but is understood to be an Oxford College tutor, and Honorary Canon of Christ Church. The orthodoxy of the *Guardian* is, we believe, unimpeachable. We notice therefore with gratification that not only is Darwinism thoroughly accepted and lucidly expounded by the writer in the *Guardian*, but that he is an exceptionally well-informed and capable critic, whose scientific knowledge is varied and sound. The publication of these articles in the *Guardian* is a proof that the clergy as a body are not so unwilling to accept new scientific views as might be supposed were we to regard Dean Burgon as a fair sample of his class. The *Guardian's* contributor discusses the difficulty of reconciling the existence of a just, omnipotent, and omniscient God with the existence of pain and the ceaseless "struggle for existence," and *à propos* has a remark tinged with local colour which is worth reproducing. "And yet," he says, "man, who is so wise and good that he is always saying, with King Alphonso of Castile, 'If God had called me to His councils things would have been in better order,' has invented competitive examinations, which mean suffering and pain for all, without even a compensating 'survival of the fittest' or improvement of the race!" We believe that competitive examinations were invented by the Chinese, and introduced into Europe by Jesuit missionaries. The Chinese are celebrated among the nations of the world for the elaborate system of cruel tortures employed in their administration of justice. On the other hand, we owe tea and many other nice things to them.

The annual winter meeting of the Department of Superintendence of the U.S. National Education Association was held lately at Washington. The most important topics treated were "How and to what extent can Manual Training be ingrafted on our System of Public Schools?" and "How can the Qualifications of Teachers be determined?"

THE Archæological Congress which is to be held at Moscow, in 1890, will have an international character, many German, French, Italian, and other men of science having already been invited to attend. The Congress will consider the following subjects: (1) prehistoric antiquities; (2) historical, geographical, and ethnographical questions; (3) Russian art monuments; (4) ecclesiastical monuments; (5) Slavo-Russian language and writing; (6) Slavo-Byzantine and West European antiquities; (7) Oriental and heathen antiquities; (8) latest progress of archæology.

MRS. ZELIA NUTTALL has been elected a Fellow of the American Association for the Advancement of Science in recognition of her researches in Mexican archæology.

A TRANSLATION of Dr. E. B. Tylor's hand-book of "Anthropology" into Spanish by D. Antonio Machado has just been published in Madrid. The author contributes a special preface drawing attention to the valuable anthropological material still to be found in Spanish America.

THE first number of what will no doubt prove to be an important and valuable periodical has just been issued. It is called *Internationales Archiv für Ethnographie*, and is edited by J. D. E. Schmeltz, of the Ethnographical Museum of Leyden, who has received promises of co-operation from many of the foremost ethnologists and anthropologists in Europe and America. The present number (which contains German, Dutch, and French contributions) opens with a striking article, in German, by Dr. L. Serrurier, Director of the Leyden Ethnographical Museum, on the arrows of New Guinea. Representations of the various types of New Guinea arrows, admirably printed in colours, illustrate this interesting paper.

WE have received the first number of *The American Anthropologist*. This new quarterly periodical is issued under the auspices of the Anthropological Society of Washington, and the editorial committee seek the co-operation of all who are interested in the advancement of anthropological science. In the first number there are papers on the law of Malthus, by Dr. James C. Walling; the development of time-keeping in Greece and Rome, by F. A. Seely; the human hand, by Dr. Frank Baker; and the Chane-abal (four-language) tribe and dialect of Chiapas, by Dr. D. G. Brinton.

THE *American Meteorological Journal* for January contains:—(1) An article by F. Waldo on instruments for measuring atmospheric pressure, showing the differences that exist in the standard barometers of different countries, and that the standards do not always remain constant for a number of years. (2) A paper by Prof. H. A. Hazen on the exposure of thermometers, with a discussion of a new plan proposed by Dr. R. Assmann. The latter paper was presented to the Berlin Academy in November last. (3) On a thirty-day period of the weather, by H. Helm Clayton. The writer considers that the period is strongly substantiated by facts, although at present they remain empirical facts.

THE Deutsche Seewarte has published the seventh volume of the results of meteorological observations for 1° squares of the North Atlantic Ocean. The object is to discuss the observations collected by German and Dutch vessels between latitude 50° and 20° N. in the North Atlantic, adjoining the district of the nine equatorial 10° squares between latitude 20° N. and 10° S., and longitude 10° and 40° W., the observations for which have been discussed by the Meteorological Council. The district now covered by the two institutions embraces 60° of latitude and 30° of longitude, with the exception of one 10° square, which will shortly be published. The German observations are published in a tabular form, showing for each degree the direction of the winds under sixteen points, the number of storms, the mean wind force, pressure, temperature of air and sea, rainfall, and other particulars. The number of observations for each subdivision is sometimes small, but always quoted, and in their present form the observations may be added to subsequently, or amalgamated with those of other countries. A small but important district south of 20° N. (the limit of the German investigation) and west of 40° W. (the limit of the English investigation), embracing the region of the origin of the West India cyclones, has yet to be undertaken by some body, to complete these important contributions to maritime meteorology.

A NEW chloride of gold, Au_2Cl_4, has been prepared by Prof. Julius Thomsen, of Copenhagen (*Journ. für Prakt. Chemie*, 1888, No. 2). The method of preparation is remarkably simple, gaseous chlorine being merely brought into contact with gold in a fine state of subdivision and at a moderately elevated temperature. About 50 grammes of finely divided gold, obtained by precipitating a solution of the trichloride with sulphurous acid, was thoroughly washed, partially dried to the consistency of a thick mud, and placed in a previously weighed glass tube. At its lower end the tube was drawn out and the delivery tube of a chlorine generator sealed on to it. A stopper and exit tube at the upper end completed the arrangement. A rapid stream of chlorine gas (half a litre per minute) was then passed through the apparatus, the lower end of the wider portion containing the gold being gently heated to start the reaction. The whole was then placed in a glass beaker surrounded by cotton-wool in order to prevent too rapid cooling, by which device the heat of the reaction itself was sufficient to complete the combination. At the commencement the absorption of chlorine was perfect, not a bubble escaping, but at the expiration of half an hour the point of saturation was reached. After expelling the uncombined chlorine the tube was again weighed, and the amount of chlorine thus taken up determined. In every experiment the proportion of chlorine to that of gold was found to be very slightly more than two to one, the average ratio being 2·09 to 1·0. The slight excess of chlorine was due to minute spangles of trichloride of gold sparsely disseminated throughout the mass. The simplicity of this mode of preparation and the constancy of the results may perhaps excite wonder that Au_2Cl_4 has not hitherto been as well known as AuCl and $AuCl_3$. As a matter of fact, Prof. Thomsen discovered it several years ago, and published his results, but owing to the adoption of different methods by later workers the conclusions of Prof. Thomsen were not considered confirmed. Now that the work has been repeated and completely verified there is no longer any reason why Au_2Cl_4 should remain in the background. It is interesting theoretically as being the aurous salt of chlor-auric acid, $HAuCl_4$.

FROM the Annual Report of the New York State Department of Public Instruction, it appears that during last year over 31,000 teachers were employed in the State of New York, and that of this number only 5821 were males. The number of children of school age was 1,763,115; the total enrolment, 1,037,812; the average attendance, 625,610. Mr. Draper, the Superintendent, the author of the Report, says that the attendance in the schools does not keep pace with the growth of the population, and that the uneducated class is increasing.

COLONEL LE MESSURIER has just brought out a third edition of his useful pocket hand-book on the "Game, Shore, and Water Birds of India." The utility of this unpretending little work has been vouched for by the call for its re-issue in an octavo form with the addition of many drawings made by the author during his recent furlough in England, and we are glad to see to what practical use he has turned some of Prof. Flower's exhibits at the Natural History Museum. Colonel Le Messurier writes as a field-naturalist for field-naturalists and sportsmen, without any great pretensions to scientific knowledge, but there is no doubt that all naturalists will gain useful hints from this little volume, which is profusely illustrated with woodcuts, giving the characteristic features of most of the species.

"THE STATESMAN'S YEAR-BOOK" for 1888 has been published. It contains additions and alterations which largely increase the value of the work, and the statistical and other information has been brought up to the latest available date.

WE have received three issues of the "Annuario" published by the Imperial Observatory at Rio de Janeiro—the issues for 1885, 1886, and 1887. The work is well compiled, and the editor evidently takes great pains to secure that each issue shall be decidedly better than its predecessors. Besides the usual collection of astronomical facts, the work contains useful tables relating to meteorology, chemistry, physics, geography, and other sciences.

THE "Annuaire Géologique Universel" of Dr. Dagincourt, which has just been issued for the third time, has been much enlarged and improved. The new volume contains an exhaustive review of recent work in palæontology and geology.

A FOURTH edition of Prof. Nichol's "Tables of European History, Literature, Science, and Art, from A.D. 200 to 1888" (Maclehose) has been issued. The idea of the work is good, but we cannot say that the scientific tables are always quite satisfactory. In his lists of men of science the compiler includes the names of some writers who have a very inadequate claim to the place he accords to them.

THE Trustees of the Australian Museum have issued a descriptive catalogue, by Dr. R. von Lendenfeld, of the Medusæ of the Australian seas. Speaking of the Scyphomedusæ, Dr. von Lendenfeld says that he has observed three species in New Zealand, three species on the coast of Victoria, and five species in Port Jackson. Two of the latter are identical with the Victorian species. Of the nine species, six have been described by Dr. von Lendenfeld; his specimens of the remaining three were not sufficiently well preserved for description. The difficulty connected with the preservation of these beautiful animals has, he points out, been a great obstacle in the way of a thorough knowledge of them.

THE fifth volume of the collected works of Paul Broca has just been issued by M. Reinwald, in Paris. This volume, which, like the others, is sold separately, is particularly interesting to zoologists. It contains Broca's numerous and important memoirs on the brain of man and primates. It is well illustrated.

M. ZOGRAFF'S new work on the structure of the *Acipenser ruthenus*, which appeared in the *Izvestia* of the Moscow Society of Amateurs of Natural Science (vol. lii. fasc. 3), will be most welcome to zoologists. Following the methods adopted by Günther, Johann Müller, and Pallas, and more especially by the Swedish ichthyologist, F. A. Smitt, who has applied the system of numerous measurements used in anthropology to the study of fishes, M. Zograff has undertaken to give anew a complete description of the Russian species of *Acipenser*, and the Central Asian species of *Scaphirhynchus*. He begins his work by a general description of the body of the Russian Acipenseridæ: the varying shapes of their heads; the indexes of length, width, and thickness of the body; the skin and spines; the teeth; the muscles; and the brain. The whole is accompanied by numerous engravings and coloured plates, great attention being given to the minute anatomy of all parts of the different species.

AMONGST the papers contained in the last issue of the Transactions of the Seismological Society of Japan (vol. xi.) is one on earth tremors in Central Japan, by Prof. Milne. The paper is a continuation of one on the same subject read before the same Society in 1883, which was referred to in these columns at the time. In the present paper the writer discusses recent investigations into earth tremors in Italy, describes tremor recorders, with special reference to an automatic tromometer, gives numerous tables of records of the latter instrument, and finally refers to the subject of earth tremors on mountains. The paper is one of great length, and is accompanied by numerous charts and tables, which make it a respectable volume in itself. The conclusions may, however, be given in a brief space. Prof. Milne says that his chief object has been to show the relationship which earth tremors hold to barometrical fluctuations, barometrical gradients, and the wind. He concludes that they are more frequent with a low than a high barometer, but even with the former they may often not be observed; that with a high gradient they are almost always observed, but with a small gradient only seldom: that the stronger the wind the more likely they are to be observed; when there has been a strong wind and no tremors it has often been a local wind, or one blowing inland from the Pacific Ocean; the recorded earthquakes do not appear to be connected with earth tremors, more than that both are more frequent at the same seasons; and tremors are as severe on the summit of a lofty mountain as on the plains. So far as his observations have hitherto gone in Japan, it appears that the majority of earth tremors are movements produced by the action of the wind upon the surface of the earth, and that these may often be propagated to distant places where wind disturbances have not occurred.

ON January 13, at 11.10 p.m., a faint shock of earthquake was felt in the district of Örebro, in Central Sweden. It was not accompanied by any subterranean noise.

AT five o'clock on Sunday afternoon a cyclone broke over Mount Vernon, a town in Illinois, sixty miles to the south-east of St. Louis. Many persons were killed or injured, and five hundred buildings were demolished in a few minutes. The cyclone is said to have come up from the south-west with a rotary whirling motion, sweeping a path five hundred yards wide and several miles long, within which everything was destroyed.

DURING last month the so-called "red after-glow" was observed at sunset in the vicinity of Stockholm. Varying in intensity the glare extended considerably towards the zenith.

THE Finnish Government is on the point of organizing a number of stations along the coast of Finland for the observation of the nature and peculiarities of the drift-ice during the winter months.

A LARGE block of stone with rude drawings and some Runic inscriptions has just been discovered in the island of Tjörn, on the south-west coast of Sweden. It is of particular interest as being the first of its kind found in the southern part of the province of Bohus.

A MEETING has just been held at Tönsberg, in Norway, of those interested in the Arctic seal fisheries in that country, for the purpose of considering the Scottish Fishery Board's proposals that the close time for seal should end on April 10 instead of as at present April 3, and begin on July 10 instead of July 15. Both proposals were unanimously rejected, the reason advanced being that their adoption would tend to ruin the industry, so far as Norway is concerned. The Scotch proposal that young and old seal should be treated alike during the open season was adopted. Finally, the following resolutions were passed: (1) that it was advisable that the close season should end at 6 a.m. on April 3 instead of at midnight; (2) that the law of preservation of seal should be altered so that the area covered by it should range from 60° to 70° N., and from 10° E. to the coast of Greenland. A report of the meeting will be forwarded to the Scottish Fishery Board for their consideration.

THE Norwegian Fishery Promotion Society of Bergen has petitioned the Government for a grant of £15,000 for the development of the deep-sea fisheries of Norway.

THE Merchant Taylors Company have recently voted ten guineas to the Parkes Museum to aid in its work of practical teaching and demonstrating sanitary science.

THE additions to the Zoological Society's Gardens during the past week include a Bonnet Monkey (*Macacus sinicus* ♀), two Rhesus Monkeys (*Macacus rhesus* ♀ ♀) from India, an Alpine Marmot (*Arctomys marmotta* ♀), European, a Vulpine Phalanger (*Phalangista vulpina* ♂) from Australia, presented by Mr. H. Austin Clow, F.Z.S.; three Esquimaux Dogs (*Canis familiaris*) from Greenland, presented by Mr. W. T. Tournay, F.Z.S.; three Derbian Wallabys (*Halmaturus derbianus*) from Australia, presented by Lieut. C. M. Hepworth, R.N.R.; four Alpine Accentors (*Accentor alpinus*), European, presented by the Lord Lilford, F.Z.S.; a Cardinal Grosbeak (*Cardinalis virginianus*) from North America, presented by Mr. Ayerst; four Lion Marmosets (*Midas rosalia*), an Eyra (*Felis eyra*) from Brazil, four Parrot Finches (*Erythrura psittacea*) from New Caledonia, two Common Gulls (*Larus canus*), a Black-headed Gull (*Larus ridibundus*), British, purchased; four Cereopsis Geese (*Cereopsis novæ-hollandiæ*) bred in the Gardens.

OUR ASTRONOMICAL COLUMN.

MR. TEBBUTT'S OBSERVATORY, WINDSOR, NEW SOUTH WALES.—Mr. John Tebbutt, the well-known and enthusiastic amateur astronomer of New South Wales, has just published a little pamphlet giving a history and description of his private observatory, the work of which, he remarks with justifiable pride, "has proved of sufficient importance to admit of Windsor being placed in the list of observatories in the British and American *Nautical Almanacs*, the *Connaissance des Temps*, and the *Berliner Astronomisches Jahrbuch*." And this distinction has been well earned, for the lists here given of observations made, and of papers contributed to various scientific publications, show the history of the little observatory to have been a most honourable one. Mr. Tebbutt has made all the observations himself, and until 1881 performed all the reductions; latterly he has received occasional assistance in the computations from his son or friends near. His instrumental equipment was for many years of the most modest description: for seven years it consisted principally of a sextant, and a telescope of 1⅝ inches aperture. In 1861 a refractor of 3¼ inches aperture, and in 1864 a transit instrument of 2 inches, were added. In 1872, Mr. Tebbutt became the possessor of an equatorial of 4½ inches, which was his chief instrument until about a year and a half ago, when he bought a fine 8-inch equatorial by Grubb, once the property of the late Dr. Bone, of Castlemaine. The observations made have been principally of comets, for a number of which Mr. Tebbutt has also computed orbits, but daily meteorological observations have been kept up for twenty-five years, the results of which have been published in five parts, and transit observations have been taken regularly for time. Mr. Tebbutt has also done good service to science by his papers on astronomical subjects in various organs of the colonial press, for hitherto the private pursuit of astronomy has been greatly neglected in the Australian colonies, and he has almost stood alone as an amateur observer. It is to be hoped that this record of his labours and his success may call forth many imitators.

PULKOWA OBSERVATORY.—The Report of this Observatory for the year ending May 31, 1887, refers to the heavy loss the institution sustained in the death of Dr. August Wagner. Owing to his death, the work of publication has been somewhat delayed; he had, indeed, finished a memoir on personal and instrumental errors for the introduction of vol. xii., but the materials he left for the stellar and planetary catalogues were not so readily dealt with. Still, it is expected that this volume, and the introduction to vol. xiv., may soon be ready for publication; vols. xv. and xvi., which will contain meridian observations for the period 1872–80, and the catalogue, are ready to follow vol. xiv. through the press. Of vol. viii., the catalogue, forming the first part—meridian observations 1840–69 of Bradley and other stars down to mag. 6—has already been distributed, and the remainder is in hand; vol. x., Prof. Struve's double-star observations, is still incomplete. The observational work of the Observatory has suffered no great change. The 30-inch refractor has been used by Dr. H. Struve for the measurement of the more difficult of Burnham's stars, the fainter satellites of Saturn, and the satellite of Neptune. The old 15-inch has been used by Drs. H. Struve and Hasselberg for photographic experiments, and by Prof. O. Struve for observations of Procyon, which has now been followed through nearly a complete period of its orbital motion.

WOLSINGHAM OBSERVATORY.—The Rev. T. E. Espin reports that during the last year he has continued his sweeping for red stars and stars with remarkable spectra, and that he has published spectra of 126 objects in the *Astronomische Nachrichten*, Nos. 2788 and 2825, of which eighty-six were found in the sweeps. Fifteen of the stars were of Secchi's type IV. Three new variables of long period have been discovered, and the usual observations of variables have been made and forwarded to Prof. E. C. Pickering. The Observatory has been enriched by the present from Canon Slatter of a fine 4·8-inch equatorial by Troughton and Simms. The new edition of Birmingham's Red Star Catalogue will be ready for the printer in a few weeks.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1888 FEBRUARY 26—MARCH 3.

(FOR the reckoning of time the civil day, commencing at Greenwich mean midnight, counting the hours on to 24, is here employed.)

At Greenwich on February 26

Sun rises, 6h. 54m.; souths, 12h. 13m. 10·0s.; sets, 17h. 32m.: right asc. on meridian, 22h. 36·3m.; decl. 8° 48′ S. Sidereal Time at Sunset, 3h. 56m.

Moon (Full, February 27, 12h.) rises, 16h. 22m.; souths, 23h. 50m.; sets, 7h. 4m.*: right asc. on meridian, 10h. 15·3m.; decl. 12° 53′ N.

Planet.	Rises.	Souths.	Sets.	Right asc. and declination on meridian.	
	h. m.	h. m.	h. m.	h. m.	° ′
Mercury..	6 53 ...	12 50 ..	18 47 ...	23 13·3 ...	1 26 S.
Venus ...	5 39 ...	9 58 ..	14 17 ...	20 20·4 ...	19 26 S.
Mars ...	22 15* ..	3 33 ...	8 51 ...	13 55·0 ...	8 58 S.
Jupiter ...	1 40 ...	5 53 ...	10 6 ...	16 14·6 ...	20 17 S.
Saturn ...	13 50 ...	21 47 ...	5 44*...	8 11·6 ...	20 35 N.
Uranus ...	21 8*...	2 41 ...	8 14 ...	13 2·6 ...	5 56 S.
Neptune..	9 38 ...	17 18 ...	0 58*...	3 42·0 ...	17 57 N.

* Indicates that the rising is that of the preceding evening and the setting that of the following morning.

Variable Stars.

Star.	R.A.	Decl.			
	h. m.	° ′		h. m.	
U Cephei	0 52·4 ...	81 16 N. ...	Feb. 29,	18 56	*m*
Algol	3 0·9 ...	40 31 N. ...	Mar. 1,	3 12	*m*
λ Tauri...	3 54·5 ...	12 10 N. ...	,, 3,	1 28	*m*
ζ Geminorum ...	6 57·5 ...	20 44 N. ...	Feb. 28,	22 0	*m*
R Canis Majoris...	7 14·5 ...	16 12 S. ...	,, 29,	19 18	*m*
			Mar. 1,	22 34	*m*
U Monocerotis ...	7 25·5 ...	9 33 S. ...	Feb. 26,		*m*
δ Libræ	14 55·0 ...	8 4 S. ...	,, 29,	1 32	*m*
R Ophiuchi... ...	17 1·3 ...	15 57 S. ...	,, 28,		*M*
U Ophiuchi... ...	17 10·9 ...	1 20 N. ...	Mar. 1,	0 42	*m*
		and at intervals of		20 8	
X Sagittarii... ...	17 40·5 ..	27 47 S. ...	Feb. 26,	2 0	*M*
W Sagittarii ...	17 57·9 ...	29 35 S. ...	Mar. 2,	5 0	*m*
R Lyræ	18 51·9 ...	43 48 N. ...	,, 2,		*M*
U Aquilæ	19 23·3 ...	7 16 S. ...	,, 3,	5 0	*m*
S Aquilæ	20 6·5 ...	15 17 N. ...	Feb. 26,		*m*
Y Cygni	20 47·6 ...	34 14 N. ...	,, 27,	19 24	*m*
			Mar. 1,	19 18	*m*
S Cephei	21 36·6 ...	78 7 N. ...	,, 3,		*M*
δ Cephei	22 25·0 ...	57 51 N. ...	,, 1,	21 0	*M*

M signifies maximum; *m* minimum.